

WHAT WE CLAIM ARE:

1. An electronic device comprising:
 - a ReO_3 layer having a (001) orientation; and
 - an oxide ferroelectric layer having a perovskite structure, said oxide
- 5 ferroelectric layer being formed on said ReO_3 layer and having a (001) orientation.
2. The electronic device according to claim 1, further comprising: a MgO layer having a (001) orientation, wherein said ReO_3 layer is formed on said MgO layer.
3. The electronic device according to claim 2, further comprising: an amorphous
- 10 layer, wherein said MgO layer is formed on said amorphous layer. *Lg. SiO₃*
4. The electronic device according to claim 3, further comprising: an upper electrode formed on said oxide ferroelectric layer.
5. The electronic device according to claim 4,
- 15 wherein said amorphous layer is formed of an insulating layer, which is formed to cover a semiconductor element formed on a semiconductor substrate, and
- 20 a conductive plug is provided to electrically connect said semiconductor element, said conductive plug penetrating through said insulating layer.
6. The electronic device according to claim 5, wherein said ReO_3 layer is formed on said insulating layer and over said conductive plug.
7. The electronic device according to claim 5, further comprising:
 - an interlayer insulating layer covering said upper electrode;
 - 25 a plurality of apertures penetrating through said interlayer insulating layer and exposing said conductive plug and said upper electrode; and
 - a local wiring connecting said conductive plug and said upper electrode via said apertures.

8. The electronic device according to claim 2, wherein said MgO layer is a single crystal MgO layer having a (001) plane.

9. The electronic device according to claim 1, wherein said ReO₃ layer is added with metal other than Re.

5 10. The electronic device according to claim 4, wherein said upper electrode is formed of an IrO₂ layer, or a stack of an IrO₂ layer and a SrRuO₃ layer.

11. A method of manufacturing an electronic device, comprising the steps of:

- (a) preparing a ReO₃ layer having a (001) orientation; and
- (b) forming an oxide ferroelectric layer having a perovskite structure and

10 a (001) orientation, on said ReO₃ layer.

12. The method of manufacturing an electronic device according to claim 11, wherein said step(a) deposits said ReO₃ layer on a single crystal MgO layer having the (001) orientation.

13. The method of manufacturing an electronic device according to claim 11,

15 wherein said step (a) includes the steps of:

- (a-1) preparing a MgO layer having a (001) orientation; and
- (a-2) forming said ReO₃ layer having a (001) orientation on said MgO layer.

14. The method of manufacturing an electronic device according to claim 13,

20 wherein said step (a-1) includes the steps of:

- (a-1-1) preparing an amorphous layer; and
- (a-1-2) forming said MgO layer having a (001) orientation on said amorphous layer.

15. The method of manufacturing an electronic device according to claim 14,

25 wherein at least one of said steps (a-1-2), (a-2) and (b) is done by metalorganic chemical vapor deposition (MOCVD).

16. The method of manufacturing an electronic device according to claim 15, wherein all of said steps (a-1-2), (a-2) and (b) are done by MOCVD.

17. The method of manufacturing an electronic device according to claim 15, wherein said MOCVD is executed at a substrate temperature of 620°C or lower.

5 18. The method of manufacturing an electronic device according to claim 15, wherein said MOCVD uses, as organometal raw material, a dipivaloilmethanate (DPM) compound of metal or an iso-proxy (i-PrO) compound of metal.

19. The method of manufacturing an electronic device according to claim 14, wherein at least one of said steps (a-1-2), (a-2) and (b) is done by sputtering.

10 20. The method of manufacturing an electronic device according to claim 11, further comprising the step of: (c) forming at least one upper electrode layer on said oxide ferroelectric layer.